BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF DELAWARE

IN THE MATTER OF THE APPLICATION OF	)	
DELMARVA POWER & LIGHT COMPANY FOR	)	
AN INCREASE IN NATURAL GAS BASE RATES	)	PSC DOCKET NO. 12-546
AND MISCELLANEOUS TARIFF CHANGES	)	
(FILED DECEMBER 7, 2012)	)	

DIRECT TESTIMONY OF DAVID C. PARCELL
ON BEHALF OF COMMISSION STAFF

JUNE 3, 2013

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I.   STATEMENT OF QUALIFICATIONS

Q.   **Please state your name and address.**

A.   My name is David C. Parcell. My business address is Suite 580, 9030 Stony Point Parkway, Richmond, Virginia 23235.

Q.   **By whom are you employed?**

A.   I am President of Technical Associates, Inc., ("TAI"), which is a firm specializing in public utility regulation.

Q.   **Please describe TAI and the services it provides.**

A.   TAI is an economic consulting firm that was established in 1969. Since its establishment, members of the firm have conducted studies and provided expert testimony in several hundred regulatory proceedings involving the establishment of rate levels and related issues for public utilities and other regulated industries. These studies and/or testimonies have been prepared on behalf of numerous Public Utility Commission staffs and intervener groups, such as public counsels and state Attorneys General.

Q.   **What is your educational and professional background?**

A.   I hold B.A. (1969) and M.A. (1970) degrees in economics and business from Virginia Polytechnic and State University (VA Tech) and a M.B.A. (1985) from Virginia Commonwealth University. I have been a consulting economist with TAI since its inception in 1969.

Q.   **Please summarize your experience in testifying in rate proceedings involving regulated companies.**

A.   I have been testifying on cost of capital, and related financial issues, involving public utilities since 1972. Throughout my career, I have filed testimony and/or testified in

1		about 500 public utility proceedings. These proceedings have involved electric, natural
2		gas distribution, natural gas and products pipeline, telephone/telecommunications, and
3		water/wastewater companies. These testimonies have been filed in more than 50 state
4		and federal regulatory agencies in the United States and Canada. Attachment 1 provides
5		a more complete description of my experience and qualifications.
6		
7	Q.	**Have you previously testified before this Commission?**
8	A.	Yes, I have. Since 1997, I have testified in approximately 20 public utility proceedings
9		before this Commission, all on behalf of the Commission Staff. Several of these
10		proceedings were Delmarva Power & Light Co. ("DP&L") rate proceedings.
11		
12	**II.**	**PURPOSE OF TESTIMONY**
13		
14	Q.	**What is the purpose of your testimony in this proceeding?**
15	A.	The purpose of my testimony is to address the cost of capital for DP&L relative to its
16		application. In addition, since DP&L is owned by Pepco Holdings, Inc. ("Pepco
17		Holdings"), I have also evaluated Pepco Holdings in my analyses.
18		
19	Q.	**On whose behalf are you submitting this testimony?**
20	A.	I have been retained by the Commission Staff
21		
22	Q.	**Please summarize your cost of capital analyses and conclusions.**
23	A.	It is my recommendation that DP&L's cost of capital be established based upon the
24		following:
25		• A capital structure with 50.78 percent debt and 49.22 percent common
26		equity as of December 31, 2012, the same capital structure proposed by
27		DP&L;
28		• A cost of debt of 4.91 percent, the December 31, 2012 embedded cost of
29		debt for DP&L;
30		• A cost of equity in a range of 9.20 percent to 9.75 percent (9.475 percent
31		mid-point), based on the end results of three cost of equity models;

1   •   Discounted Cash Flow ("DCF") results of 9.0 percent to 9.4 percent (9.2

2   percent mid-point);

3   •   Capital Asset Pricing Model ("CAPM") results of 6.2 percent to 6.3

4   percent;

5   •   Comparable Earnings Model ("CEM") results of 9.5 percent to 10.0

6   percent (9.75 percent mid-point); and,

7   •   These DCF, CAPM, and CEM analyses are applied to two groups of proxy,

8   publicly-traded natural gas utilities.

9

10 **Q.** **What are your cost of capital recommendations for DP&L?**

11 A.   My recommendations are shown on Exhibit___ (DCP-1), Schedule 1 and are as follows:

12

Capital	Percent	Cost	Weighted Cost
Debt	50.78%	4.91%	2.49%
Common Equity	49.22%	9.20-9.75%	4.53-4.80%
			7.02-7.29%
			(7.15% mid-point)

18 **Q.** **How do your cost of capital recommendations compare with the cost of capital**

19   **requested by DP&L?**

20 A.   DP&L is requesting a total cost of capital of 7.53 percent, which reflects a return on

21   equity of 10.25 percent.

22

23 **III.**   **APPROACH OF TAI COST OF CAPITAL ANALYSES**

24

25   **A.**   **Description of DP&L**

26

27 **Q.** **Please describe DP&L and its ownership structure.**

28 A.   DP&L is a utility that provides electric transmission, distribution, and default supply to

29   Delaware and portions of Maryland. It also supplies natural gas service in Northern

30   Delaware. DP&L is a wholly-owned subsidiary of Pepco Holdings.

1   Two mergers over the past several years have resulted in changes in the

2   organization structure of this company. In 1998, DP&L combined with Atlantic Energy,

3   Inc. (parent company of Atlantic City Electric Company – ACE) to form Conectiv, a

4   holding company for DP&L and ACE. In 2002, Conectiv was acquired by Pepco

5   Holdings (formerly Potomac Electric Power Co.). Conectiv is now a subsidiary of Pepco

6   Holdings and DP&L and ACE are subsidiaries of Conectiv.

7

8 **Q.**   **Please describe Pepco Holdings.**

9 A.   Pepco Holdings was created in connection with the 2002 merger of Potomac Electric

10   Power Co. and Conectiv. This is a holding company whose primary subsidiaries are:

11   • Potomac Electric Power Company ("Pepco") – a regulated utility that delivers

12   electricity in Washington, D.C. and its Maryland suburbs;

13   • Conectiv, LLC – an entity that owns DP&L and Atlantic City Electric Company,

14   which provide electric and gas delivery in Delaware, Maryland and New Jersey;

15   • Pepco Energy Services, Inc. – a provider of energy efficiency and renewable

16   energy services; and,

17   • Potomac Capital Investment Corporation – invests in energy-related financial

18   investments.

19   Within this framework, DP&L, ACE and Pepco remain as separate operating public

20   utilities.

21

22 **Q.**   **What are the current bond ratings of DP&L?**

23 A.   The present bond ratings (senior secured debt) of DP&L are as follows:

24   Moody's   A3

25   Standard & Poor's   A

26   Fitch   A

27

28 **Q.**   **What have been the trends in DP&L's and Pepco Holdings' bond ratings?**

29 A.   This is shown on Schedule 2, which indicates two points. First, DP&L has experienced

30   upgrades in its ratings since 2007. Second, the ratings of DP&L are similar to those of

1   Potomac Electric Power Company and Atlantic City Electric, but higher than those of

2   Pepco Holdings.

3

4   **B.**   **Selection of Proxy Groups**

5

6 **Q.**   **How did you select your group of proxy companies?**

7 A.   I selected a group of seven publicly-traded natural gas utilities. These are identified as

8   Schedule 3, along with the criteria used to select them.

9

10 **Q.**   **Why are these proxy companies a proper standard for estimating the cost of capital**

11   **for DP&L?**

12 A.   These companies are all publicly-traded natural gas utilities that share similar

13   characteristics to DP&L, such as operations, capital structure ratios, and security ratings.

14   As such, they can be used as an estimate of the market-based cost of equity for DP&L.

15

16 **Q.**   **Have you performed cost of equity analyses for any other companies?**

17 A.   As a check on my DCF, CAPM, and CEM analyses for my proxy group, I have also used

18   a secondary proxy group. This group is comprised of the nine proxy natural gas utilities

19   used by DP&L witness Hevert.

20

21 **IV.**   **<u>CAPITAL STRUCTURE ANALYSES</u>**

22

23 **Q.**   **What have been the recent capital structures of DP&L?**

24 A.   The recent capital structure ratios of DP&L are shown on Schedule 4, Page 1 of 3. This

25   indicates the following capital structure ratios:

26

	2008	2009	2010	2011	2012
Total Debt	55.2%	49.3%	50.7%	51.7%	51.6%
Common Equity	44.8%	50.7%	49.3%	48.3%	48.4%

27

28

29

30   This reflects a capital structure with approximately 50 percent equity and 50 percent debt

31   throughout the past four years.

1   Page 2 of Schedule 4 shows the capital structures of DP&L's parent company –

2   Pepco Holdings:

3

4

	2008	2009	2010	2011	2012
Total Debt	56.2%	56.8%	49.8%	51.4%	53.7%
Common Equity	43.8%	43.2%	50.2%	48.6%	46.3%

5

6

7   This reflects similar capital structures to those of DP&L since 2010.

8   Page 3 of Schedule 4 shows the 2012 capital structures of Pepco Holdings'

9   regulated subsidiaries. This indicates that DP&L's capital structure is similar to the other

10   regulated subsidiaries of Pepco Holdings.

11

12   **Q.   How do the DP&L and Pepco Holdings capital structure ratios over this period**

13   **compare to other electric utilities?**

14   A.   Schedule 5 shows the capital structure ratios of the proxy group of natural gas utilities

15   over the 2008-2012 period. The average common equity ratios for this group are as

16   follows:

17

18

	2008	2009	2010	2011	2012
Incl. S-T Debt	44%	48%	47%	48%	47%
Excl. S-T Debt	52.5%	53.5%	56.1%	55.5%	54.3%

19

20

21   In general, these companies have maintained common equity ratios of about 45 to 55

22   percent. These are similar to than the common equity ratios of DP&L over this period.

23

24   **Q.   What do you believe is an appropriate capital structure for DP&L, relative to this**

25   **proceeding?**

26   A.   I use capital structure for DP&L of 49.22 percent common equity and 50.78 percent debt,

27   as requested by the Company. This is the capital structure of the Company as of December

28   30, 2012.

29   I also note that the capital structure proposed by DP&L does not include short-

30   term debt. I generally favor the inclusion of short-term debt in a utility's capital structure

31   for ratemaking purposes, especially when it can be shown to be consistently financing a

1   portion of rate base. It is apparent that DP&L has not consistently utilized short-term

2   debt in recent years, as is indicated on my Schedule 4, page 1. As a result, I have not

3   included short-term debt.

4

5 **V.**   **COST RATE FOR DEBT**

6

7 **Q.**   **What is the current cost of DP&L's debt?**

8 A.   I propose to use the consolidated cost of debt of DP&L in this proceeding. This cost rate

9   is 4.91 percent, as shown in the Company's filing.

10

11 **VI.**   **COST OF EQUITY ANALYSIS**

12

13   **A.**   **Economic/Legal Principles and Methodologies**

14

15 **Q.**   **What are the primary economic and legal principles that establish the standards for**

16   **determining a fair rate of return for a regulated utility?**

17 A.   Regulated utility rates are normally established in a manner designed to allow the

18   recovery of their costs, including capital costs. This is frequently referred to as "cost of

19   service" ratemaking.   Rates for regulated utilities traditionally have been primarily

20   established using the "rate base – rate of return" concept. Under this method, utilities are

21   allowed to recover a level of operating expenses, taxes, and depreciation deemed

22   reasonable for rate-setting purposes, and are granted an opportunity to earn a fair rate of

23   return on the assets utilized (i.e., rate base) in providing service to their customers.

24   The rate base is derived from the asset side of the utility's balance sheet as a

25   dollar amount and the rate of return is developed from the liabilities/owners' equity side

26   of the balance sheet as a percentage. Thus, the revenue impact of the cost of capital is

27   derived by multiplying the rate base by the rate of return.

28   The rate of return is developed from the cost of capital, which is estimated by

29   weighting the capital structure components (i.e., debt and common equity) by their

30   percentages in the capital structure and multiplying these values by their cost rates. This

31   is also known as the weighted cost of capital.

1   Technically, "fair rate of return" is a legal and accounting concept that refers to an

2   ex post (after the fact) earned return on an asset base, while the cost of capital is an

3   economic and financial concept which refers to an ex ante (before the fact) expected or

4   required return on a liability base. In regulatory proceedings, however, the two terms are

5   often used interchangeably, and I have equated the two concepts in my testimony.

6   From an economic standpoint, a fair rate of return is normally interpreted to mean

7   that an efficient and economically managed utility will be able to maintain its financial

8   integrity, attract capital, and establish comparable returns for similar risk investments.

9   These concepts are derived from economic and financial theory and are generally

10   implemented using financial models and economic concepts.

11   Although I am not a lawyer and I do not offer a legal opinion, my testimony is

12   based on my understanding that two United States Supreme Court decisions provide the

13   controlling standards for a fair rate of return. The first decision is *Bluefield Water Works*

14   *and Improvement Co. v. Public Serv. Comm'n of West Virginia,* 262 U.S. 679 (1923). In

15   this decision, the Court stated:

16   What annual rate will constitute just compensation depends upon
17   many circumstances and must be determined by the exercise of fair
18   and enlightened judgment, having regard to all relevant facts. A
19   public utility is entitled to such rates as will permit it to earn a
20   return on the value of the property which it employs for the
21   convenience of the public equal to that generally being made at the
22   same time and in the same general part of the country on
23   investments in other business undertakings which are attended by
24   corresponding risks and uncertainties; but it has no constitutional
25   right to profits such as are realized or anticipated in highly
26   profitable enterprises or speculative ventures. The return should be
27   reasonably sufficient to assure confidence in the financial
28   soundness of the utility, and should be adequate, under efficient
29   and economical management, to maintain and support its credit
30   and enable it to raise the money necessary for the proper discharge
31   of its public duties. A rate of return may be reasonable at one time,
32   and become too high or too low by changes affecting opportunities
33   for investment, the money market, and business conditions
34   generally.

35

36   It is generally understood that the *Bluefield* decision established the following standards

37   for a fair rate of return: comparable earnings, financial integrity, and capital attraction. It

1   also noted that required returns change over time, and there is an underlying assumption

2   that the utility be operated in an efficient manner.

3   The second decision is the *Federal Power Comm'n v. Hope Natural Gas Co.*, 320

4   U.S. 591 (1942). In that decision, the Court stated:

> 5 The rate-making process under the [Natural Gas] Act, i.e., the
> 6 fixing of 'just and reasonable' rates, involves a balancing of the
> 7 investor and consumer interests . . . . From the investor or company
> 8 point of view it is important that there be enough revenue not only
> 9 for operating expenses but also for the capital costs of the business.
> 10 These include service on the debt and dividends on the stock. By
> 11 that standard the return to the equity owner should be
> 12 commensurate with returns on investments in other enterprises
> 13 having corresponding risks. That return, moreover, should be
> 14 sufficient to assure confidence in the financial integrity of the
> 15 enterprise, so as to maintain its credit and to attract capital.

16

17   The three economic and financial parameters in the *Bluefield* and *Hope* decisions –

18   comparable earnings, financial integrity, and capital attraction – reflect the economic

19   criteria encompassed in the "opportunity cost" principle of economics. The opportunity

20   cost principle provides that a utility and its investors should be afforded an opportunity

21   (not a guarantee) to earn a return commensurate with returns they could expect to achieve

22   on investments of similar risk. The opportunity cost principle is consistent with the

23   fundamental premise on which regulation rests, namely, that it is intended to act as a

24   surrogate for competition.

25

26 **Q.**   **How can these parameters be employed to estimate the cost of capital for a utility?**

27 A.   Neither the courts nor economic/financial theory have developed exact and mechanical

28   procedures for precisely determining the cost of capital. This is the case because the cost

29   of capital is an opportunity cost and is prospective-looking, which dictates that it must be

30   estimated.

31   There are several useful models that can be employed to assist in estimating the

32   cost of equity capital, which is the capital structure item that is the most difficult to

33   determine. These include the DCF, CAPM, CEM and risk premium ("RP") methods.

34

1 **Q.   Which methods have you employed in your analyses of the cost of common equity in**
2   **this proceeding?**
3 A.   I have utilized three methodologies to determine DP&L's cost of common equity: the
4   DCF, CAPM and CEM methods. Each of these methodologies will be described in more
5   detail in the testimony that follows.
6
7   **B.   General Economic Conditions**
8
9 **Q.   Are economic and financial conditions important in determining the cost of capital**
10   **for a Public Utility?**
11 A.   Yes. The cost of capital, for both fixed-cost (debt and preferred stock) components and
12   common equity, are determined in part by current and prospective economic and
13   financial conditions. At any given time, each of the following factors has an influence on
14   the cost of capital:
15   • The level of economic activity (i.e., growth rate of the economy);
16   • The stage of the business cycle (i.e., recession, expansion, or transition);
17   • The level of inflation;
18   • The level and trend of interest rates; and,
19   • Expected economic conditions.
20
21   My understanding is that this position is consistent with the *Bluefield* decision that
22   noted "[a] rate of return may be reasonable at one time and become too high or too low
23   by changes affecting opportunities for investment, the money market, and business
24   conditions generally." *Bluefield*, 262 U.S. at 693.
25
26 **Q.   What indicators of economic and financial activity did you evaluate in your**
27   **analyses?**
28 A.   I examined several sets of economic statistics from 1975 to the present. I chose this time
29   period because it permits the evaluation of economic conditions over four full business
30   cycles, allowing for an assessment of changes in long-term trends. This period also

1   approximates the beginning and continuation of active rate case activities by public
2   utilities.

3   A business cycle is commonly defined as a complete period of expansion
4   (recovery and growth) and contraction (recession). A full business cycle is a useful and
5   convenient period over which to measure levels and trends in long-term capital costs
6   because it incorporates the cyclical (i.e., stage of business cycle) influences, and thus,
7   permits a comparison of structural (or long-term) trends.

8

9 **Q.   Please describe the timeframe of the four prior business cycles and the current**
10   **cycle.**

11 A.   The four prior complete cycles and current cycle cover the following periods:

12

Business Cycle	Expansion Cycle	Contraction Period
1975-1982	Mar. 1975-July 1981	Aug. 1981-Oct. 1982
1982-1991	Nov. 1982-July 1990	Aug. 1990-Mar. 1991
1991-2001	Apr. 1991-Mar. 2001	Apr. 2001-Nov. 2001
2001-2009	Dec. 2001-Nov. 2007	Dec. 2007-June 2009
Current	July 2009-	

Source: National Bureau of Economic Research, "Business Cycle Expansions and Contractions."

19 **Q.   Do you have any general observations concerning the recent trends in economic**
20   **conditions and their impact on capital costs over this broad period?**

21 A.   Yes, I do. Until the end of 2007, the United States economy had enjoyed general
22   prosperity and stability since the early 1980s.[1] This period had been characterized by
23   longer economic expansions, relatively tame contractions, low and declining inflation,
24   and declining interest rates and other capital costs.

25   However, in 2008 and 2009, the economy declined significantly, initially as a
26   result of the 2007 collapse of the "sub-prime" mortgage market and the related liquidity
27   crisis in the financial sector of the economy. Subsequently, this financial crisis
28   intensified with a more broad-based decline, initially based on a substantial increase in
29   petroleum prices and a dramatic decline in the U.S. financial sector, culminating with the

---

[1]   There was a "Tech Bubble" in 1999-2000, in which prices of many technology stocks encountered a dramatic run-up that was followed by an equally dramatic decline in 2001-2002.

1 collapse and/or bailouts of a significant number of well-known institutions such as Bear

2 Stearns, Lehman Brothers, Merrill Lynch, Freddie Mac, Fannie Mae, AIG and Wachovia.

3 The recession also witnessed the demise of national companies such as Circuit City and

4 the bankruptcies of automotive manufacturers such as Chrysler and General Motors.

5   This decline has been described as the worst financial crisis since the Great

6 Depression and has been referred to as the "Great Recession." Since 2008, the U.S. and

7 other governments have implemented and continue to implement unprecedented actions

8 to attempt to correct or minimize the scope and effects of this recession.

9   The recession reached its low point in mid-2009 and the economy has since begun

10 to expand again, although at a slow and uneven rate. However, the length and severity of

11 the recession, as well as a relatively slow and uneven recovery, indicates that the impacts

12 of the recession have been and will be felt for an extended period of time. As an example

13 of this, even in the fourth year of the recovery/expansion, the U.S. unemployment rate

14 still stands at nearly 8 percent—close to the highest unemployment rate experienced over

15 the last several decades.

16

17 **Q.** **Please describe recent and current economic and financial conditions and their**

18   **impact on the cost of capital.**

19 A. Schedule 6 shows several sets of relevant economic data for the cited time periods. Pages

20   1 and 2 contain general macroeconomic statistics; pages 3 and 4 show interest rates; and

21   pages 5 and 6 contain equity market statistics.

22   Pages 1 and 2 show that 2007 was the sixth year of an economic expansion but, as

23   I previously noted, the economy subsequently entered a significant decline, as indicated

24   by the growth in real (i.e., adjusted for inflation) Gross Domestic Product ("GDP"),

25   industrial production, and an increase in the unemployment rate. This recession lasted

26   until mid-2009, making it a longer-than-normal recession, as well as a deeper recession.

27   Since then, economic growth has been erratic and lower than the initial periods of prior

28   expansions.

29   Pages 1 and 2 also show the rate of inflation. As reflected in the Consumer Price

30   Index ("CPI"), for example, inflation rose significantly during the 1975-1982 business

31   cycle and reached double-digit levels in 1979-1980. The rate of inflation declined

| 1 | substantially beginning in 1981, and remained at or below 6.1 percent during the 1983-1991 business cycle. Since 2008, the CPI has been 3 percent or lower, with 2012 being only 1.7 percent. It is thus apparent that the rate of inflation has generally been declining over the past several business cycles. Current levels of inflation are at the lowest levels of the past 35 years and are indicative of low inflation, which is reflective of lower capital costs. |

1   substantially beginning in 1981, and remained at or below 6.1 percent during the 1983-

2   1991 business cycle. Since 2008, the CPI has been 3 percent or lower, with 2012 being

3   only 1.7 percent. It is thus apparent that the rate of inflation has generally been declining

4   over the past several business cycles. Current levels of inflation are at the lowest levels

5   of the past 35 years and are indicative of low inflation, which is reflective of lower

6   capital costs.

7

8 **Q.**   **What have been the trends in interest rates over the four prior business cycles and**

9   **at the current time?**

10 A.   Pages 3 and 4 of Schedule 6 show several series of interest rates. Rates rose sharply to

11   record levels in 1975-1981 when the inflation rate was high and generally rising. Interest

12   rates declined substantially in conjunction with inflation rates during the remainder of the

13   1980s and throughout the 1990s. Interest rates declined even further from 2000-2005 and

14   generally recorded their then-lowest levels since the 1960s.

15   Since 2008, the Federal Reserve has lowered the Federal Funds rate (i.e., short-

16   term rate) to 0.25 percent, an all-time low.   In 2008 and early 2009, there was a

17   pronounced decline in short-term rates, as well as long-term U.S. Treasury Securities

18   yields, and an increase in corporate bond yields, reflecting the "flight to safety," wherein

19   there was a reluctance of investors to purchase common stocks and corporate bonds while

20   concomitantly moving their money into very safe government bonds. Since then, as seen

21   on page 4 of Schedule 6, both U.S. and corporate bond yields have declined to their

22   lowest levels in the past four business cycles and in more than 35 years, with even

23   corporate lending rates remaining at historically low levels, again reflective of lower

24   capital costs.

25

26 **Q.**   **What trends does Schedule 6 show for trends of common share prices?**

27 A.   Pages 5 and 6 show several series of common stock prices and ratios. These indicate that

28   stock prices were essentially stagnant during the high inflation/high interest rate

29   environment of the late 1970s and early 1980s. The 1983-1991 business cycle and the

30   more recent cycles witnessed a significant upward trend in stock prices. The beginning

31   of the recent financial crisis saw stock prices decline precipitously, as stock prices in

1   2008 and early 2009 were down significantly from 2007 levels, reflecting the

2   financial/economic crisis. Beginning in the second quarter of 2009, prices have

3   recovered substantially and have reached and exceeded the levels achieved prior to the

4   "crash."

5

6 Q. **What conclusions do you draw from your discussion of economic and financial**

7   **conditions?**

8 A. It is apparent that recent economic and financial circumstances have been different from

9   any that have prevailed since at least the 1930s. The late 2008-early 2009 deterioration in

10   stock prices, the decline in U.S. Treasury bond yields, and an increase in corporate bond

11   yields were evidenced in the then-evident "flight to safety." On the other side of this

12   "flight to safety" is the negative perception of the recent declines in capital costs and

13   returns, which significantly reduced the value of most retirement accounts, investment

14   portfolios and other assets. One significant aspect of this has been a decline in investor

15   expectations of returns, including stock returns. Finally, as noted above, utility interest

16   rates are currently at levels below those prevailing prior to the financial crisis of late 2008

17   to early 2009 and are near the lowest level in the past 35 years.

18

19   **C.   Discounted Cash Flow Analysis**

20

21 Q. **What is the theory and methodological basis of the discounted cash flow model?**

22 A. The DCF model is one of the oldest, as well as the most commonly-used, models for

23   estimating the cost of common equity for public utilities. It is my understanding that the

24   DCF methodology is most preferred by the Delaware Commission in determining cost of

25   equity for regulated utilities. The DCF model is based on the "dividend discount model"

26   of financial theory, which maintains that the value (price) of any security or commodity

27   is the discounted present value of all future cash flows.

28   The most common variant of the DCF model assumes that dividends are expected

29   to grow at a constant rate. This variant of the dividend discount model is known as the

30   constant growth or Gordon DCF model. In this framework, cost of capital is derived by

31   the following formula:

$$K = \frac{D}{P} - g$$

1

2

3   where: P = current price

4   D = current dividend rate

5   K = discount rate (cost of capital)

6   g = constant rate of expected growth

7

8   This formula essentially recognizes that the return expected or required by investors is

9   comprised of two factors: the dividend yield (current income) and expected growth in

10   dividends (future income).

11

12 **Q.   Please explain how you have employed the DCF model.**

13 A.   I have utilized the constant growth DCF model. In doing so, I have combined the current

14   dividend yield for the groups of proxy company stocks described in a previous section

15   with several indicators of expected dividend growth.

16

17 **Q.   How did you derive the dividend yield component of the DCF equation?**

18 A.   There are several methods that can be used for calculating the dividend yield component.

19   These methods generally differ in the manner in which the dividend rate is employed (i.e.

20   current versus future dividends or annual versus quarterly compounding of dividends). I

21   believe the most appropriate dividend yield component is a quarterly compounding

22   variant, which is expressed as follows:

$$Yield = \frac{D_0(1 - 0.5g)}{P_0}$$

23

24

25   This dividend yield component recognizes the timing of dividend payments and dividend

26   increases.

27   The P_o in my yield calculation is the average (of high and low) stock price for

28   each proxy company for the most recent three-month period (February-April 2013). The

29   D_o is the current annualized dividend rate for each proxy company.

1	**Q.**	**How have you estimated the dividend growth component of the DCF equation?**
2	A.	The dividend growth rate component of the DCF model is usually the most crucial and
3		controversial element involved in using this methodology. The objective of estimating
4		the dividend growth component is to reflect the growth expected by investors that is
5		embodied in the price (and yield) of a company's stock. As such, it is important to
6		recognize that individual investors have different expectations and consider alternative
7		indicators in deriving their expectations. This is evidenced by the fact that every
8		investment decision resulting in the purchase of a particular stock is matched by another
9		investment decision to sell that stock.

10   A wide array of indicators exist for estimating the growth expectations of

11   investors. As a result, it is evident that no single indicator of growth is always used by all

12   investors. It, therefore, is necessary to consider alternative indicators of dividend growth

13   in deriving the growth component of the DCF model.

14   I have considered five indicators of growth in my DCF analyses. These are:

15   1.   Years 2008-2012 (5-year average) earnings retention, or

16   fundamental growth (per Value Line);

17   2.   Five-year average of historic growth in earnings per share (EPS),

18   dividends per share (DPS), and book value per share (BVPS) (per

19   Value Line);

20   3.   Years 2013, 2014 and 2016-2018 projections of earnings retention

21   growth (per Value Line);

22   4.   Years 2010-2012 to 2016-2018 projections of EPS, DPS, and

23   BVPS (per Value Line); and,

24   5.   Five-year projections of EPS growth as reported by First Call (per

25   Yahoo Finance).

26   I believe this combination of growth indicators is a representative and appropriate set

27   with which to begin the process of estimating investor expectations of dividend growth

28   for the groups of proxy companies. I also believe that these growth indicators reflect the

29   types of information that investors consider in making their investment decisions. As I

30   indicated previously, investors have an array of information available to them, all of

31   which should be expected to have some impact on their decision-making process.

1 **Q. Please describe your DCF calculations.**

2 A. Schedule 7 presents my DCF analysis. Page 1 shows the calculation of the "raw"

3 (i.e. prior to adjustment for growth) dividend yield for each proxy company. Pages 2 and

4 3 show the indicated growth rates for the groups of proxy companies. Page 4 shows the

5 "raw" DCF calculations, which are presented on two bases: mean and median. These

6 results can be summarized as follows:

			Mean		Median	
	Mean	Median	Low[a]	High[b]	Low[a]	High[b]
Proxy Group	8.4%	8.2%	7.9%	9.2%	7.5%	9.4%
Hevert Group	8.4%	8.2%	8.0%	9.0%	7.6%	9.1%

[a] Using low growth rate.
[b] Using high growth rate.

12 The DCF results in Schedule 7 indicate average (mean and median) DCF cost rates of

13 about 8.2 percent to 8.4 percent. The "high" DCF results are 9.2 percent to 9.4 percent

14 for the proxy group and 9.0 percent to 9.1 percent for the Hevert group.

16 **Q. What do you conclude from your DCF analyses?**

17 A. Based upon my analyses, I believe a range of 9.0 percent to 9.4 percent represents the

18 current DCF cost of equity for DP&L. This focuses on the highest DCF results for each

19 proxy group. The mid-point of this range is 9.20 percent.

21 **D. Capital Asset Pricing Model Analysis**

23 **Q. Please describe the theory and methodological basis of the capital asset pricing**

24 **model.**

25 A. The CAPM is a version of the risk premium method. The CAPM describes and measures

26 the relationship between a security's investment risk and its market rate of return. The

27 CAPM was developed in the 1960s and 1970s as an extension of modern portfolio theory

28 ("MPT"), which studies the relationships among risk, diversification, and expected

29 returns.

1	Q.	**How is the CAPM derived?**

2   A.   The general form of the CAPM is:

$$K = R_f - (R_m - R_f)$$

5   where: K = cost of equity

6   R_f = risk free rate

7   R_m = return on market

8   β = beta

9   R_m-R_f = market risk premium

11   As noted previously, the CAPM is a variant of the risk premium method. I believe the

12   CAPM is generally superior to the simple risk premium method because the CAPM

13   specifically recognizes the risk of a particular company or industry (i.e., beta), whereas

14   the simple risk premium method does not, but rather assumes the same cost of equity for

15   all companies exhibiting similar bond ratings.

17 Q.   **What companies have you utilized to perform your CAPM analyses?**

18 A.   I have performed CAPM analyses for the same groups of proxy firms evaluated in my

19   DCF analyses.

21 Q.   **What rate did you use for the risk-free rate?**

22 A.   The first term of the CAPM is the risk-free rate (R_f). The risk-free rate reflects the level

23   of return that can be achieved without accepting any risk.

24   In CAPM applications, the risk-free rate is generally recognized by use of U.S.

25   Treasury securities. Two general types of U.S. Treasury securities are often utilized as

26   the R_f component, short-term U.S. Treasury bills and long-term U.S. Treasury bonds.

27   I have performed CAPM calculations using the three-month average yield

28   (February-April 2013) for long-term (20-year) U.S. Treasury bonds. Over this three-

29   month period, these bonds had an average yield of 2.70 percent.

31

			Q.	**What is beta and what betas did you employ in your CAPM?**

1   Q.   **What is beta and what betas did you employ in your CAPM?**

2   A.   Beta is a measure of the relative volatility (and thus risk) of a particular stock in relation

3   to the overall market. Betas of less than 1 are considered less risky than the market,

4   whereas betas greater than 1 are more risky. Utility stocks traditionally have had betas

5   below 1. I utilized the most recent Value Line betas for each company in the groups of

6   proxy companies.

7

8   Q.   **How did you estimate the market risk premium component?**

9   A.   The market risk premium component (R_m-R_f) represents the investor-expected premium

10   of common stocks over the risk-free rate, or government bonds. For the purpose of

11   estimating the market risk premium, I considered alternative measures of returns of

12   Standard & Poor's ("S&P") 500 (a broad-based group of large U.S. companies) and 20-

13   year U.S. Treasury bonds.

14   First, I have compared the actual annual returns on equity of the S&P 500 with the

15   actual annual yields of U.S. Treasury bonds. Schedule 8 shows the return on equity for

16   the S&P 500 group for the period 1978-2011 (all available years reported by S&P). This

17   Schedule also indicates the annual yields on 20-year U.S. Treasury bonds, as well as the

18   annual differentials (i.e. risk premiums) between the S&P 500 and U.S. Treasury 20-year

19   bonds. Based upon these returns, I conclude that this measure of the risk premium is

20   about 6.47 percent.

21   I have also considered the total returns (i.e. dividends/interest plus capital

22   gains/losses) for the S&P 500 group as well as for long-term (i.e., 20-year) government

23   bonds, as tabulated by Morningstar (formerly Ibbotson Associates), using both arithmetic

24   and geometric means. I have considered the total returns for the entire 1926-2012 period,

25   which are as follows:

26

	S&P 500	L-T Gov't Bonds	Risk Premium
Arithmetic	11.8%	6.1%	5.7%
Geometric	9.8%	5.7%	4.1%

29   I conclude from this that the expected risk premium is about 5.42 percent (i.e.

30   average of all three risk premiums - 6.47 percent from Schedule 8 and 5.7 percent

31   arithmetic and 4.1 percent geometric from Morningstar). I believe that a combination of

1	arithmetic and geometric means is appropriate since investors have access to both types
2	of means and presumably, both types are reflected in investment decisions and thus, stock
3	prices and cost of capital. I note, in this regard, that mutual funds are required to report
4	comparative returns on a geometric basis and that Value Line, a major source of investor
5	information, provides both historic and prospective growth rates on a compound (i.e.,
6	geometric) basis.

7

8   **Q.**   **What are your CAPM results?**

9   A.   Schedule 9 shows my CAPM calculations. The results are:

	Mean	Median
Proxy Group	6.3%	6.2%
Hevert Group	6.3%	6.2%

14   **Q.**   **What is your conclusion concerning the CAPM cost of equity?**

15   A.   The CAPM results collectively indicate a cost of about 6.2 percent to 6.3 percent for the

16   groups of proxy companies. I conclude that the CAPM cost of equity for DP&L is 6.3

17   percent, the upper end of the range.

18

19   **E.**   **Comparable Earnings Method Analysis**

20

21   **Q.**   **Please describe the basis of the CEM.**

22   A.   The CEM is derived from the "corresponding risk" standard of the *Bluefield* and *Hope*

23   cases. This method is thus based upon the economic concept of opportunity cost. As

24   previously noted, the cost of capital is an opportunity cost: the prospective return

25   available to investors from alternative investments of similar risk.

26   The CEM is designed to measure the returns expected to be earned on the original

27   cost book value of similar risk enterprises. Thus, this method provides a direct measure

28   of the fair return, because the CEM translates into practice the competitive principle upon

29   which regulation is based.   This is the case because the CEM focuses on the

30   "corresponding risk" standard of the *Bluefield* and *Hope* decisions, which relates to the

31   returns earned by enterprises of corresponding risks and uncertainties.

1   The CEM normally examines the experienced and/or projected returns on book

2   common equity. The logic for examining returns on book equity follows from the use of

3   original-cost, rate-base regulation for public utilities, which uses a utility's book common

4   equity to determine the cost of capital. This cost of capital is, in turn, used as the fair rate

5   of return which is then applied (multiplied) to the book value of rate base to establish the

6   dollar level of capital costs to be recovered by the utility.   This technique is thus

7   consistent with the rate base methodology used to set utility rates.

8

9   **Q.**   **How have you employed the CEM in your analysis of DP&L's common equity**

10   **costs?**

11 **A.**   I conducted the CEM by examining realized returns on equity for several groups of

12   companies and evaluating the investor acceptance of these returns by reference to the

13   resulting market-to-book ratios. In this manner, it is possible to assess the degree to

14   which a given level of return equates to the cost of capital. It is generally recognized for

15   utilities that market-to-book ratios of greater than one (i.e., 100%) reflect a situation

16   where a company is able to attract new equity capital without dilution (i.e., above book

17   value). As a result, one objective of a fair cost of equity is the maintenance of stock

18   prices above book value.

19   I would further note that the CEM analysis, as I have employed it, is based upon

20   market data (through the use of market-to-book ratios) and is thus essentially a market

21   test. As a result, my analysis is not subject to the criticisms occasionally made by some

22   who maintain that past earned returns do not represent the cost of capital. In addition, my

23   analysis also uses prospective returns and thus is not confined to historical data.

24

25

26 **Q.**   **What time periods have you examined in your CEM analysis?**

27 A.   My CEM analysis considers the experienced equity returns of the proxy groups of

28   utilities for the period 1992-2012 (i.e., the last twenty-one years). The CEM analysis

29   requires that I examine a relatively long period of time in order to determine trends in

30   earnings over at least a full business cycle. Further, in estimating a fair level of return for

31   a future period, it is important to examine earnings over a diverse period of time in order

1 to avoid any undue influence from unusual or abnormal conditions that may occur in a

2 single year or shorter period. Therefore, in forming my judgment of the current cost of

3 equity I have focused on three periods: 2009-2012 (the current cycle), 2002-2008 (the

4 recent cycle) and 1992-2001 (the prior business cycle).

5

6 **Q. Please describe your CEM analysis.**

7 A. Schedules 10 and 11 contain summaries of experienced returns on equity for several

8 groups of companies, while Schedule 12 presents a risk comparison of utilities versus

9 unregulated firms.

10 Schedule 10 shows the earned returns on average common equity and market-to-

11 book ratios for the groups of proxy utilities. These can be summarized as follows:

12

	Proxy Group	Hevert Group
Historic ROE		
Mean	10.8-11.2%	11.2-11.6%
Median	10.8-11.4%	11.0-11.8%
Historic M/B		
Mean	169-173%	175-180%
Median	160-178%	167-179%
Prospective ROE		
Mean	9.9-10.5%	10.3-10.7%
Median	9.5-10.5%	9.5-10.5%

18 These results indicate that historic returns of 10.8 percent to 11.8 have been

19 adequate to produce market-to-book ratios of 160 percent to 180 percent for the groups of

20 proxy utilities. Furthermore, projected returns on equity for 2013, 2014 and 2016-2018

21 are within a range of 9.5 percent to 10.7 percent for the utility groups. These relate to

22 2012 market-to-book ratios of 155 percent or higher.

23

24 **Q. Have you also reviewed earnings of unregulated firms?**

25 A. Yes. As an alternative, I also examined a group of largely unregulated firms. I have

26 examined the S&P 500 Composite group, since this is a well-recognized group of firms

27 that is widely utilized in the investment community and is indicative of the competitive

28 sector of the economy. Schedule 11 presents the earned returns on equity and market-to-

1	book ratios for the S&P 500 group over the past twenty years. As this Schedule
2	indicates, over the three periods this group's average earned returns ranged from 12.4
3	percent to 14.7 percent with market-to-book ratios ranging between 201 percent and 341
4	percent.
5	
6	**Q.**	**How can the above information be used to estimate the cost of equity for DP&L?**
7	A.	The recent earnings of the proxy utility and S&P 500 groups can be utilized as an
8		indication of the level of return realized and expected in the regulated and competitive
9		sectors of the economy. In order to apply these returns to the cost of equity for proxy
10		utilities, however, it is necessary to compare the risk levels of the utility industry with
11		those of the competitive sector. I have done this in Schedule 12, which compares several
12		risk indicators for the S&P 500 group and the utility groups. The information in this
13		schedule indicates that the S&P 500 group is more risky than the utility proxy groups.
14	
15	**Q.**	**What return on equity is indicated by the CEM analysis?**
16	A.	Based on the recent earnings and market-to-book ratios, I believe the CE analysis
17		indicates that the cost of equity for the proxy utilities is no more than 9.5 percent to 10.0
18		percent. The mid-point of this range is 9.75 percent. Historic returns of 10.8 percent to
19		11.8 percent have resulted in market-to-book ratios of 160 and greater. Prospective
20		returns of 9.5 percent to 10.7 percent result in current (2012) market-to-book ratios of
21		over 155 percent. As a result, it is apparent that returns below this level would result in
22		market-to-book ratios of well above 100 percent. An earned return of 9.75 percent
23		should thus result in a market-to-book ratio of over 100 percent. As I indicated earlier,
24		the fact that market-to-book ratios substantially exceed 100 percent indicates that historic
25		and prospective returns of over 10 percent reflect earnings levels that exceed the cost of
26		equity for those regulated companies.
27		Please also note that my CEM analysis is not based on a mathematic formula
28		approach, as are the DCF and CAPM methodologies. Rather, it is based on recent trends
29		and current conditions in equity markets. Further, it is based on the direct relationship
30		between returns on common stock and market-to-book ratios of common stock. In utility
31		rate setting, a fair rate of return is based on the utility's assets (i.e., rate base) and the

1   book value of the utility's capital structure.   As stated earlier, maintenance of a
2   financially stable utility's market-to-book ratio at 100 percent, or a bit higher, is fully
3   adequate to maintain the utility's financial stability. On the other hand, a market price of
4   a utility's common stock that is 150 percent or more above the stock's book value is
5   indicative of earnings that exceed the utility's reasonable cost of capital. Thus, actual or
6   projected earnings do not directly translate into a utility's reasonable cost of equity.
7   Rather, they must be viewed in relation to the market-to-book ratios of the utility's
8   common stock.

9   My 9.75 percent CEM recommendation is not designed to result in market-to-
10 book ratios as low as 1.0 for DP&L. Rather, it is based on current market conditions and
11 the proposition that ratepayers should not be required to pay rates based on earnings
12 levels that result in excessive market-to-book ratios.

13

14 **F.   Return On Equity Recommendation**

15

16 **Q.   Please summarize the results of your three cost of equity analyses.**

17 A.   My three methodologies produce the following:

18

	Range	Mid-Point
Discounted Cash Flow	9.0-9.4%	9.20%
Capital Asset Pricing Model	6.3%	6.3%
Comparable Earnings	9.5-10.0%	9.75%

23 These produce a broad range of 6.3 percent to 10.0 percent. The mid-points range from
24 6.3 percent to 9.75%. Excluding the CAPM results, the ranges are 9.0 percent to 10.0
25 percent and the mid-points are 9.20 percent to 9.75 percent.

26

27 **Q.   What return on equity do you recommend for DP&L?**

28 A.   I recommend a range of 9.20 percent to 9.75 percent, which reflects my DCF and CE
29   mid-point results.

30

1	Q.	**It appears that your CAPM results are less than your DCF and CEM results. Does**
2		**this imply that the CAPM results should not be considered in determining the cost**
3		**of equity for DP&L?**
4	A.	No. It is apparent that the CAPM results are less than the DCF and CEM results. There
5		are two reasons for the lower CAPM results. First, risk premiums are lower currently
6		than was the case in prior years. This is also reflective of a decline in investor
7		expectations of equity returns and risk premiums. Second, the level of interest rates on
8		U.S. Treasury bonds (i.e., the risk free rate) has been lower in recent years. This is
9		partially the result of the actions of the Federal Reserve System to stimulate the economy.
10		This also impacts investor expectations of return in a negative fashion. I note that,
11		initially, investors may have believed that the decline in Treasury yields was a temporary
12		factor that would soon be replaced by a rise in interest rates. However, this has not been
13		the case as interest rates have remained low and continued to decline for the past four-
14		plus years. The Federal Reserve has further announced its intention to continue stimulus
15		(and maintain low interest rates) through at least 2014. As a result, it cannot be
16		maintained that low interest rates (and low CAPM results) are temporary and do not
17		reflect investor expectations. Consequently, the CAPM results should be considered as
18		one factor in determining the cost of equity for DP&L. At the very least, the CAPM
19		results indicate the capital costs continue at historically low levels and that DP&L's cost
20		of equity is less than in prior years.
21		
22	**VII.**	**TOTAL COST OF CAPITAL**
23		
24	Q.	**What is the total cost of capital that results from your capital structure, cost of debt**
25		**and cost of equity recommendations?**
26	A.	This is shown on Schedule 1. This reflects the actual capital structure ratios of 49.22
27		percent equity and 50.78 percent debt, cost of long-term debt of 4.91 percent, and cost of
28		equity of 9.20 percent to 9.75 percent. This results in a total cost of capital range of 7.02
29		percent to 7.29 percent.
30		

1	**Q.**	**Does you cost of capital recommendation provide the Company with a sufficient**		
2		**level of earnings to maintain its financial integrity?**		
3	A.	Yes, it does. Schedule 13 shows pre-tax coverage that would result if DP&L earned my		
4		cost of capital recommendation. As the results indicate, my recommended range would		
5		exceed a coverage level consistent with the benchmark range for an A-rated utility. In		
6		addition, the debt ratio (which reflects the Company's proposed capital structure)		
7		matches the benchmark for an A-rated utility.		

8

9 **VIII. CRITIQUE OF DP&L'S COST OF CAPITAL REQUEST**

10

11	**Q.**	**What is your understanding of the cost of capital being requested by DP&L in this**
12		**proceeding?**
13	A.	I understand that DP&L is requesting a 7.53 percent total cost of capital in this
14		proceeding. This 7.53 percent total cost of capital is recommended by DP&L witnesses
15		Kevin M. McGowan and Robert B. Hevert.

16

17	**Q.**	**What is the basis of DP&L's requested 7.53 percent total cost of capital?**
18	A.	According to Mr. McGowan's testimony, this is derived as follows:

19

Capital	Percent	Cost	Cost of Capital
Debt	50.78%	4.91%	2.49%
Equity	49.22%	10.25%*	5.04%
			7.53%

* As recommended by DP&L witness Hevert.

24

25	**Q.**	**Have you reviewed the testimony of DP&L witness Robert B. Hevert?**
26	A.	Yes, I have. Mr. Hevert is recommending a return on equity for DP&L of 10.25 percent.
27		His 10.25 percent recommendation is derived as follows:

DCF Results	**Mean Low**	**Mean**	**Mean High**
Quarterly Growth DCF Results			
30-Day Average	7.51%	9.35%	11.37%
90-Day Average	7.55%	9.39%	11.42%
180-Day Average	7.62%	9.46%	11.49%

Constant Growth DCF Results			
30-Day Average	7.38%	9.16%	11.12%
90-Day Average	7.42%	9.20%	11.16%
180-Day Average	7.49%	9.27%	11.23%
Multi-Stage DCF Results			
30-Day Average	9.26%	9.98%	10.89%
90-Day Average	9.28%	10.02%	10.92%
180-Day Average	9.33%	10.10%	10.99%

CAPM Results	**Sharp Ratio Derived Market Risk Premium**	**Bloomberg Derived Market Risk Premium**	**Capital IQ Derived Market Risk Premium**
Average Bloomberg Beta Coefficient			
Current 30-Year Treasury (2.87%)	8.38%	10.24%	10.19%
Near Term Projected 30-Year Treasury (3.15%)	8.66%	10.52%	10.47%
Average Value Line Beta Coefficient			
Current 30-Year Treasury (2.87%)	7.85%	9.52%	9.48%
Near Term Projected 30-Year Treasury (3.15%)	8.13%	9.80%	9.76%

Bond Yield Plus Risk Premium	**Current 30-Year Treasury (2.87%)**	**Near-Term Projected 30-Year Treasury (3.15%)**	**Long-Term Projected 30-Year Treasury (5.30%)**
Risk Premium	10.12%	10.13%	10.74%

Q. **Do you have any general comments about Mr. Hevert's testimony and conclusions?**

A. Yes, I do. Mr. Hevert's testimony and conclusions significantly over-state the cost of capital for DP&L. Each of his methods is systematically biased upward in a manner that significantly inflates his return on equity conclusions. In addition, of the 42 ROE calculations cited above, 30 are less than the 10.25 percent ROE that Mr. Hevert is recommending. Further, 24 of the 42 are less than 10 percent.

Q. **What are your disagreements with Mr. Hevert's constant growth DCF analyses?**

A. Mr. Hevert's constant growth DCF analyses are based on 30-day, 90-day and 180-day average stock prices for the periods ending October 12, 2012, annualized dividends per share as of October 12, 2012, the average of Value Line, First Call and Zack's EPS projections, and his measure of sustainable growth. His DCF analyses are applied to his group of nine natural gas utilities.

Mr. Hevert's constant growth DCF analyses are shown on his Schedule (RBH-1). It is apparent from review of his Exhibit that his "Low DCF ROE" for each proxy company reflects the dividend yield and the lowest of the four growth rates he considers.

| | His "Mean DCF ROE" considers the average of all four growth rates and his "High DCF
1 | | ROE" only considers the highest growth rate for each company. Stated differently, the
2 | | "High DCF" result considers only the highest of the four growth rates for each company
3 | | and ignores the other three growth rates. Thus, the "Mean High DCF" result for one
4 | | proxy company may reflect only the Zacks EPS Growth, while the "Mean High DCF"
5 | | result for another proxy company may reflect only the Value Line growth result. I note

His "Mean DCF ROE" considers the average of all four growth rates and his "High DCF ROE" only considers the highest growth rate for each company. Stated differently, the "High DCF" result considers only the highest of the four growth rates for each company and ignores the other three growth rates. Thus, the "Mean High DCF" result for one proxy company may reflect only the Zacks EPS Growth, while the "Mean High DCF" result for another proxy company may reflect only the Value Line growth result. I note that only his "Mean High DCF" results are as high as his 10.25 percent recommendation. In addition, the "Mean DCF" results, reflecting all of the growth rates, are nearly all below 10.0 percent and most are below 9.5 percent. Mr. Hevert's DCF result implicitly assumes that investors *only* consider the most optimistic growth rate for each individual company in making investment decisions.

It is also apparent that Mr. Hevert's methodology focuses selectively and almost exclusively on just one of the four growth rate estimates for each of his proxy companies. For example, his "High DCF ROE" for his nine proxy companies relies selectively on the following growth rates:

AGL Resources	Value Line EPS
Atmos Energy	Zacks EPS
Laclede Gas	Sustainable Growth
New Jersey Resources	Sustainable Growth
Northwest Natural Gas	Sustainable Growth
Piedmont Natural Gas	First Call EPS
South Jersey Industries	Sustainable Growth
Southwest Gas	Value Line EPS
WGL Holdings	First Call EPS

Q. **Is it appropriate to focus on the highest growth rate, on a company-to-company basis, to determine the cost of equity for an electric utility such as DP&L?**

A. No. It is neither realistic nor appropriate to focus on a single growth rate in a DCF context, especially when one "cherry picks" the highest growth rate for each company from among the different growth rate indicators that reflect the highest growth rate for

1		each company. As I indicated above, Mr. Hevert's analyses focus only on methods and
2		data that produce the highest possible results.
3	**Q.**	**Do you agree with Mr. Hevert's risk premium component of the CAPM?**
4	A.	No. Mr. Hevert's utilize CAPM analyses two risk premium values: 10.06 percent and
5		10.00 percent. Both of these greatly exceed the long-term experience (e.g., 1929 to
6		present) of investment return differential between common stocks and government bonds,
7		as described earlier in my testimony. Over this period, risk premiums have averaged less
8		than 6 percent. Again, Mr. Hevert chooses data that produces higher and excessive
9		results.
10		
11	**Q.**	**Do you have any responses to Mr. Hevert's risk premium analyses?**
12	A.	Yes. Mr. Hevert's risk premium approach compares the allowed ROEs for natural gas
13		utilities and 30-Year U.S. Government Bond yields over the period 1992 to the third
14		quarter of 2012. He then performs a regression analysis to develop an expected
15		relationship between 30-year U.S. Government Bond yields and the cost of equity for
16		natural gas utilities. He applies this regression result to three sets of 30-year U.S.
17		Treasury Bonds (i.e., 2.87 percent, 3.15 percent and 5.30 percent) and correspondingly
18		arrives at his 10.12 percent to 10.74 percent conclusion.
19		It is apparent from the workpapers to Mr. Hevert's Schedule (RBH-8) that the
20		actual authorized returns on equity for natural gas utilities have averaged well below the
21		10.12 percent to 10.74 percent he proposes. In contrast, his workpapers show recent (i.e.,
22		2010 to present) average quarterly authorized returns on equity falling from 10.15 percent
23		in 2010 to 10.00 percent in 2011 to 9.75 percent in 2012.
24		
25	**Q.**	**Does this complete your testimony?**
26	A.	Yes, it does.